

Spent Nuclear Fuel (SNF) Stabilization and Disposition Storage Operations (HQ-0012X); and SNF Stabilization and Disposition (RL-0012)

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Deactivation: A painter applying finishing touches to the surface of the "cured" grout in 105 KE



Fuel Retrieval: Multi-Canister Overpack (MCO) #386 – Last MCO of loadable fuel



Canister Storage Building: MCO Welding

Cold Vacuum Drying Facility: MCO Processing



Sludge Retrieval and Disposition: Test loading a large-diameter container into casks at K Basins



Overview

This section addresses work in Project Baseline Summary (PBS) HQ-0012X, *Spent Nuclear Fuel Stabilization and Disposition Storage Operations*; and RL-0012, *Spent Nuclear Fuel Stabilization and Disposition*.

NOTE: Unless otherwise noted, all information contained herein is as of the end of October 2004.

Notable Accomplishments

Spent Nuclear Fuel (SNF) Stabilization and Disposition Storage Operations (PBS HQ-0012X)

Site-Wide Fuel: SNF received the 28th Interim Storage Cask of Fast Flux Test Facility fuel at the 200 Area Interim Storage Area.

FH interfaced with Bechtel Hanford, Inc. (BHI), on anticipated requirements for potential receipt of discovered fuel from B/C Reactor areas at K West Basin. BHI will arrange a meeting with RL and FH to establish roles and responsibilities for this activity, should RL decide to proceed with the addition of this work scope to the baseline.

SNF provided additional technical input on Hanford SNF and multi-canister overpack (MCO) design to the National SNF Program for use in the Yucca Mountain Project license application.

SNF Stabilization and Disposition (PBS RL-0012)

Sludge Disposition: SNF completed the Readiness Assessment and initiated sludge collection in the K East Basin, thereby meeting Tri-Party Agreement (TPA) Milestone M-34-33A on October 31, 2004.

Fuel Movement Activities: FH completed removal of remaining loadable fuel on October 15, 2004, completing TPA Milestone M-34-18B and Defense Nuclear Facilities Safety Board Milestone 2001-1. As of October 15, 2004, a cumulative total of 386 MCOs containing an estimated 2,093 metric tons of heavy metal have been shipped/removed from the K Basins.

MCO Welding at the Canister Storage Building: SNF welded and "N" stamped eight MCOs during October. As of November 12, 2004, a cumulative total of 271 MCOs were welded and "N" stamped, which leaves 137 MCOs to be welded.

Issues

The methodology of determining transuranic content of empty aluminum canisters removed from the basins and sent to the Environmental Restoration Disposal Facility is in question. A task team is evaluating waste characterization methods.

Issuance of the baseline data Comprehensive Environmental Response, Compensation, and Liability Act Record of Decision amendment for North Load Out Pit sludge treatment will be delayed. As an alternative, a Notice of Construction was submitted to the Washington State Department of Health on September 30, 2004. Approval is required by November 30, 2004.

The K Basins Closure Project is going to initiate discussions with the current "N" Stamp MCO welding vendor to extend the term of the subcontract from February 28, 2005, through welding completion. This extension may result in a higher-than-planned cost to complete MCO welding since the vendor has indicated informally that the price will increase.

Anticipated FY 2005 FH Funds (\$M)

		FY 2005 Anticipated Funding w/Carryover
HQ0012X	SNF Stabilization and Disposition Storage O	\$ 2.8
RL-0012	SNF Stabilization & Disposition	\$ 113.4
Total		\$ 116.2

FY 2005 Schedule/Cost Performance (\$M)

		Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance \$	Schedule Variance %	Cost Variance \$	Cost Variance %	Budget At Completion
HQ0012X	SNF Stabilization and	\$0.2	\$0.2	\$0.1	\$0.0	-0.5%	\$0.1	67.7%	\$2.6
RL-0012	SNF Stabilization & Disposition	\$8.4	\$6.9	\$8.0	-\$1.5	-18.0%	-\$1.1	-16.7%	\$120.4
Total		\$8.5	\$7.0	\$8.1	-\$1.5	-21.4%	-\$1.0	-14.6%	\$123.0

Numbers are rounded to the nearest \$M and include the closure services allocation.

Schedule Performance (-\$1.5M/-21.4%): The PBS HQ-0012X variance is insignificant. PBS RL-0012's variance is due to:

- North load-out pit sludge collection (-\$0.8M).
- Delays in KE basin sludge containerization (-\$0.6M).
- Delayed receipt of SA Robotics Tools for deactivation. QA did not release the tools at the vendor location because the tools did not meet the nationally-recognized testing laboratory standards for engineered components (-\$0.5M).

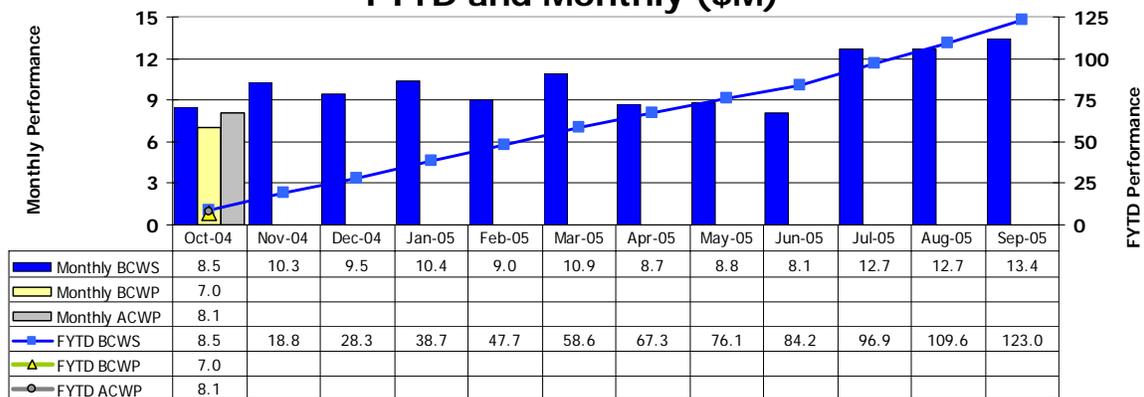
The unfavorable schedule variance is partially offset by a favorable schedule variance for completing MCO movement activities that were budgeted to be completed in FY 2004 (+\$0.4M).

Cost Performance (-\$1.0M/-14.6%): The PBS HQ-0012X variance is insignificant. PBS RL-0012's variance is due to:

- Completion of fuel movement in October (no budget) (-\$0.9M).
- Unplanned IXM procurement required due to water clarity issues requiring increased replacement frequency (-\$0.3M).
- Labor overruns due to elimination of labor adjustments to meet budget targets (-\$0.2M).
- Material costs were over budget in the 100 K deactivation and decommissioning, and the safe and compliant activities (-\$0.4M).
- The unfavorable cost variance was partially offset by lower-than-planned British Nuclear Fuel Laboratory billings for the KE-KW sludge 'hose in hose' transfer system (+\$0.8M).

The unfavorable cost variance is projects to grow significantly by year end.

Performance Analysis FYTD and Monthly (\$M)



Milestone Achievement

Number	Milestone Title	Type (TPA/PI/ DNFSB)	Due Date	Actual Date	Forecast Date	Status / Comments
M-34-18B (S00-00-902) (S10-05-012)	Complete removal of all K Basin SNF	TPA/DNFSB/ PI	7/31/04	10/15/04		Complete
DNFSB 2001-1 (S10-05-012)	Remove SNF from K Basins	DNFSB	7/31/04	10/12/04		Complete
RL-12-1.aa (S10-99-960)	Complete SNF Removal from K West	PI	8/31/04			On Schedule
RL12-1.cd (S10-99-977)	Initiate Full Scale K East Water Removal	PI	9/30/04			On Schedule
M-034-33A (S10-05-009)	Initiate Sludge Containerization	TPA	10/31/04			On Schedule
DNFSB 121 (S10-05-013)	Select Sludge Treatment Method	DNFSB	11/30/04			On Schedule
RL-12-1.c (S10-99-966)	Complete K East Discharge Chute Immobilization	PI	12/30/04			On Schedule
DNFSB 119E (S10-05-014)	Complete K East Sludge Consolidation	DNFSB	12/31/04		1/31/05	Behind Schedule
RL-12-1.ba (S10-99-083)	Treat 1 Cubic Meter of Sludge	PI	2/28/05			On Schedule
M-034-33B (S10-05-018)	Complete K East Sludge Containerization	TPA	3/1/05			On Schedule
S10-99-80	Complete MCO Welding	PI	6/30/05			On Schedule
DNFSB 120E (S10-05-015)	Complete K East Basin Sludge Removal	DNFSB	7/31/05			On Schedule
RL-12-1.b (S10-99-082)	Transfer K East Sludge to K West Containers	PI	7/31/05			On Schedule
RL-12-1.bb (S10-99-963)	Transfer Found Fuel and Fuel Scrap from K East to K West	PI	7/31/05			On Schedule
M34-21-T1 (S10-99-951)	Initiate Full Scale K West Basin Water Removal	TPA	12/31/05			On Schedule
RL-12-1.cg (S10-99-973)	Immobilize K West Discharge Chute	PI	12/31/05			On Schedule
M-034-34 (S10-05-010)	Complete Removal of K East Sludge	TPA	1/31/06			On Schedule
RL-12-1.ch (S10-99-976)	Complete Removal of Contaminated Fuel Canisters	PI	1/31/06			On Schedule
RL-12-1.ce (S10-99-978)	Complete K East Water Removal	PI	1/31/06			On Schedule
DNFSB 119W (S10-05-016)	Complete K West Sludge Containerization	DNFSB	2/28/06			On Schedule
RL-12-1.ca (S10-99-967)	Encapsulate 3 K East Bays	PI	2/28/06			On Schedule
RL-12-1.bd (S10-99-965)	Commencement of Floor and Canister Sludge Treatment	PI	3/30/06			On Schedule
RL-12-1.cb (S10-99-968)	Remove K East Superstructure	PI	3/30/06			On Schedule
M-034-35 (S10-05-011)	Containerize K West Sludge	TPA	6/30/06			On Schedule
RL-12-1.cc (S10-99-969)	Complete First K East Basin Section Disposal	PI	7/31/06			On Schedule
RL-12-1.ci (S10-99-971)	Decon/Immobilize K West Basin Wall (7600 sq. ft.)	PI	8/31/06			On Schedule
RL-12-1.bc (S10-99-081)	Remove Found Fuel and Scrap	PI	9/30/06			On Schedule
RL-12-1.cf (S10-99-972)	Complete K East Basin Removal	PI	9/30/06			On Schedule

NOTE: HQ-0012X has no milestones. Milestones and due dates are derived from the approved TPA Change Request M-34-04-01.